PROCEEDINGS OF THE
ROYAL ENTOMOLOGICAL SOCIETY
OF LONDON
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GENERAL MEETING

WEDNESDAY, 3RD OCTOBER, 1945, **at 3.30 p.m.**

AGENDA

1. Confirmation of the Proceedings of the General Meeting held on 20th June, 1945.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Proposal to remove Professor Hermann Weber from the List of Fellows.
5. Additions to the Library since the meeting of 20th June, 1945 :—

Presented.

Robert, L. P. : *Les chenilles.* Paris, 1931. [Mr. E. F. Williams.]

Kendrew, W. G. : *Climate.* 2nd edition. Oxford, 1938. [Prof. G. D. H. Carpenter, M.B.E., D.M.]

Kendrew, W. G. : *The climates of the continents.* 3rd edition. Oxford, 1937. [Prof. G. D. H. Carpenter, M.B.E., D.M.]

Arnold, G. : *The Sphecidae of Madagascar.* Cambridge, 1945. [The Author.]

Hinton, H. E. : *A monograph of the beetles associated with stored products.* Vol. 1. London, 1945. [The Trustees, British Museum, Natural History.]

6. Admission of Fellows.
7. Communications.

(1) **Dr. J. W. Evans.**

Some Tasmanian insects of exceptional interest.

[Abstract.]

Although the fauna of Tasmania is poor in insects of great size or brilliant coloration it includes several forms of the greatest interest. Species representative of thirteen genera and eight Orders have been selected for discussion. COLLEMBOLA : *Ceratrimeria* spp. ; PERLARIA : *Eusthenia* spp. ; HOMOPTERA : (i) *Hemiodoecus* spp., the most primitive living Homoptera and the sole present-day insects to retain pronotal paranota which are homologous with wings ; (ii) *Tettigarcta tomentosa*, the primitive, hairy, " soundless " cicada ; (iii) *Hindola* spp., cercopids (" froghoppers ") which inhabit calcareous tubes in

their nymphal stages; MECOPTERA: *Nannochorista* spp., small alpine Mecoptera with an Antarctic distribution and *Apteropanorpa tasmaniensis*, the only representative of its family (PANORPIDAE) so far recorded from the Southern Hemisphere and, like *Boreus*, wingless and commonly found on snow; TRICHOPTERA: *Smicridea grisea*; LEPIDOPTERA: *Papilio macleayanus*; *Hecatesia fenestrata* (the " Whistling Moth ") and *Oncopera* spp. (HEPIALIDAE); HYMENOPTERA: *Perga* spp.; DIPTERA: *Arachnocampa tasmaniensis* (MYCETOPHILIDAE), the Tasmanian " Glow-Worm."

(2) Communications and exhibits of which the titles have been received since the circulation of these agenda.

Tea will be served in the Library after the Meeting.

Fellows are particularly requested to bring suitable exhibits to the General Meetings even though it may not be possible to give notice of their intention to do so before the Meeting.

PROCEEDINGS OF THE GENERAL MEETING HELD ON 20TH JUNE, 1945.

Professor G. D. Hale CARPENTER, M.B.E., D.M., in the Chair.

Present, 44 Fellows and 32 Visitors.

The minutes of the General Meeting held on 6th June, 1945, which had been circulated, were confirmed, and signed by the Chairman.

The names of the following candidates for election were read :—

For the first time: S. R. Gauntlett, Richard A. Green, Jean Leclercq.

For the second time: P. H. Abbott, Colin J. Galbraith, Arthur Macdonell Morley.

The Secretary read the names of the following newly elected Fellows of the Society :—R. Burnett, c/o Westminster Bank, Ltd., 300 King's Road, Chelsea, London, S.W.3; G. M. Crawford, Dominion Entomologist and Assistant Director, Science Service, Dominion Department of Agriculture, Ottawa, Canada; A. F. E. Friedlein, Newstead, Bishops Hill, Hutton, Essex; T. D. Goddard, Long Hoyle Farm, Heyshott, Midhurst, Sussex; G. W. Harker, Bramblewood, Bushby Avenue, Rustington, Sussex; A. P. Kapur, c/o Imperial Institute of Entomology, 41 Queen's Gate, London, S.W.7; Mrs. V. M. Muspratt, Aicé Choko, St. Jean-de-Luz, Basses Pyrénées, France.

In accordance with the Bye Laws, Chapter XVI, § 2, the Chairman read the following written notice, delivered by himself that day to the Secretary, of a motion to remove a Fellow :—

" It is proposed to remove the name of Professor H. Weber, an Honorary Fellow, from the List of Fellows.

Signed on behalf of the Council

20th June, 1945. G. D. Hale Carpenter, President."

Thanks were voted to the donors of gifts to the Library since the last Meeting.

Dr. J. S. Kennedy and Mr. J. E. Webb signed the Obligation Book and were admitted as Fellows.

In opening the joint discussion with the Royal Meteorological Society on **Insects and Weather** Mr. G. MANLEY (President, Royal Meteorological Society) said that meteorologists and climatologists would welcome closer collaboration with entomologists, in the hope of learning more of the habits and characteristics of insects. Many species occur in the British Isles under marginal conditions and many others are subject to wide local and periodic fluctuations in numbers. It was important to obtain indications of the slight but significant climatic changes which have taken place from time to time; about 1720 there was an increase in mortality in this country from malaria, followed by a decrease in 1740 due to the severe winter. Early records were useful for evaluating the type of change that has played a part in the economy of the British Isles in the past, as, for example, in the investigation of the deterioration that has gone on in the north-west of Scotland during the last 300 years.

Major H. C. GUNTON, M.B.E., F.R.E.S., F.R.Met.Soc., made the following communication :—

"*Phenological Relationships of Meteorology and Entomology.*

" It is proposed to deal briefly with Phenology as a natural meeting ground for the meteorologist and the entomologist, with special reference to the Phenological Report published by the Royal Meteorological Society. As it is desired to emphasise what is really a proposition regarding procedure, it will be necessary to avoid technical detail.

" When the Phenological Report was reorganised in 1937 a list of 50 indigenous and 3 immigrant Lepidoptera was included, the latter in order to assist the Insect Immigration Committee of the S.E. Union of Scientific Societies. The observers include several expert entomologists who are Fellows of the Royal Entomological Society of London and whose full and regular returns constitute an invaluable basis for Table IX—Lepidoptera—and have led to a gradual increase in the interest of this section of the Report.

" One of the methods of analysis is by means of a diagram in which the responses of plants, and of insects with different life histories, in relation to the average, are shown in juxtaposition to the meteorological factors, so that cause and effect throughout the season can be appreciated. The effects of the incidence of warm and cold spells and of moisture and drought are demonstrated by this means.

" Another method has been to study graphs showing the responses from all stations in each of 3 zones, from South to North, from which it is clear that the difference in date of response between groups, as a whole, of a species in different zones is less than the difference between the individual responses in a single group : in the former case the difference may amount to a few days but in the latter it may amount to several weeks, due to specific and site characteristics.

" The employment of other methods and a summary of the conclusions reached are dealt with in the Report for 1943.

" It is, of course, impossible in the time available to deal fully with these matters at this meeting : the object of these remarks is to draw attention to the complexity of the subject and the need for the most intensive research if the underlying facts are to be brought to the surface and made available for practical application.

" There have recently been several examples of the practical application of the scheme to widely different problems, including investigations by the Research Department of the Forestry Commission, which are described in the Report for 1944, the relationship between the honey crop and the weather and the inauguration of phenological schemes overseas. There has, of course, been considerable difficulty in maintaining the scheme in being under war conditions. Under the reorganisation there was to be a Main Conference consisting of representatives of Departments and Societies interested and an Executive Committee. The difficulties have been met to a considerable extent by enlarging the membership of the Executive Committee to correspond more closely with that of the Main Conference and by calling meetings of the former body only when it appeared essential to do so. The unfailing support of the Observers has enabled the Report to be maintained with a very small reduction in numbers, the total at the end of 1944 being 250.

" It is suggested that, in addition to the maintenance of the advisory organisation already referred to, the time is now ripe for a broadening of the basis of the management and publication of the Phenological Report by closer collaboration between the Royal Meteorological Society and other Societies interested and it is hoped that this joint meeting of our two Societies may lead to a definite step forward being taken in this direction as one of the means of fostering bio-climatic research. It is only by the closest continuous contact that opportunities can be recognised and seized for making use of information available, or for suggesting modifications in procedure to obtain other information required that could be made available under the existing scheme.

" It is desired to add that it has been a source of great satisfaction to learn that Dr. Uvarov is also to make an appeal for similar co-ordinated action in other aspects of insect bio-climatics."

Mr. E. G. Burtt illustrated by means of a chart the correlation between the day-to-day changes in the weight of a colony of hive bees, the honey-flow of plants in the vicinity, and local weather conditions. He remarked that by taking series of such observations over a period of years correlation coefficients had been worked out, and suggested that a better knowledge of the inter-relationships of weather, flowers and bees might help beekeepers to increase their honey yield.

Mr. R. G. Veryard questioned whether it was generally known to entomologists that the Meteorological Office's temperature reports were obtained from screened thermometers placed 4 feet above ground; and whether entomologists made use of wet-bulb or absolute humidity observations as distinct from relative humidity; to which Dr. C. B. Williams replied that the analysis of atmospheric humidity was particularly difficult because it was so closely connected with temperature. If all nights were considered, then there was more activity (as shown by the catch in the light trap) when the nights were dry than when they were humid, but this was an entirely false effect due to the fact that warm nights were on the average drier than cool nights. When nights with the same temperature were compared, then the effect of humidity appeared as an increase in catch with increasing humidity.

Mr. L. C. W. Bonacina expressed the opinion that a closer study of the connection between the weather and the abundance and migrations of insects more localised than locusts, for example, would result in advances in our knowledge of entomology and bio-climatology alike. He instanced the relation between May frosts, Green Tortrix larvae and the subsequent production of acorns and secondary leaf growth as a case that would repay investigation.

Dr. A. C. Evans pointed out that the correlation of the eco-climate in which an insect lives with data supplied by a meteorological station, in order to provide standard data for use on subsequent occasions, was not the best way to carry out bio-climatic studies. For such a purpose continuously recording instruments should be set up in the insects' habitat, if possible, or snap readings taken at suitable times, a method which was being employed at Rothamsted in connection with soil fauna investigations.

Dr. F. E. Zeuner said that one of the difficulties encountered by the entomologist was the virtual absence of data on micro-climates. The eggs of locusts develop under certain well-defined conditions in the top four inches of the soil; their larvae depend upon the micro-climate of the surface of the soil and of low-growing vegetation; only the flying adults live more or less continuously in the climate described by the screened measurements that are usually available. Existing data that might be adequate to the study of winged insects were not applicable to those attached to plants and the soil. He welcomed the establishment of a committee on the lines proposed by Dr. Uvarov (see below) and suggested that such a committee should consider carefully the possibility of developing the recording of microclimatic data.

Dr. C. B. Williams, M.A., Sc.D., Dr. A. E. Slater, M.A., M.R.C.S., L.R.C.P., and Dr. B. P. Uvarov, C.M.G., D.Sc., made communications of which abstracts appeared on pp. 20–21 of this journal, and the following resolution, submitted by Dr. Uvarov and supported by Mr. Manley, was adopted by the meeting and referred to the Councils of both Societies :—

That this meeting invite the Councils of the two Societies to appoint a joint committee to consider what practical steps might be taken to ensure :—

(a) *that the need for bioclimatic research on insects, carried out jointly by meteorologists and entomologists, is brought to the notice of the authorities able to take the necessary action ;*

(b) *that the need for training economic entomologists in the principles of meteorology and climatology is brought to the notice of those responsible for their training ;*

(c) *that the Royal Entomological Society of London, and possibly other interested Societies, should have some share, with the Royal Meteorological Society, in the responsibility for the production of the Phenological Report.*

N. D. Riley, *Hon. Secretary.*

NOTICES

ADMISSION OF FELLOWS

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-Laws and attends the meeting on 3rd October, 1945, is requested to inform the Registrar before 3.15 p.m. on that date.

The Generic Names of British Insects, prepared by the Committee on Generic Nomenclature of the Royal Entomological Society of London, with the assistance of the Department of Entomology of the British Museum (Natural History) :

Part 1.	Recommendations relating to the publication of the committee's reports	price 6*d*.
Part 2.	The generic names of the British Rhopalocera with a check list of the species	price 3*s*. 6*d*.
Part 3.	The generic names of the British Odonata with a check list of the species	price 3*s*. 6*d*.
Part 4.	The generic names of the British Neuroptera, with a check list of the British species . . .	price 3*s*. 6*d*.
Part 5.	The generic names of the British Hymenoptera Aculeata, with a check list of the British species	price 15*s*. 0*d*.
Part 6.	The generic names of the British Carabidae, with a check list of the British species . . .	price 10*s*. 0*d*.
Part 7.	The generic names of the British Hydradephaga, with a check list of the British species . .	price 5*s*. 0*d*.
Part 8.	The generic names of the British Hemiptera-Heteroptera, with a check list of the British species	price 39*s*. 0*d*.

Stylops, a Journal of Taxonomic Entomology.

1932–1935. Vols. 1–4 (all issued). Price £1 16*s*. 0*d*. each; to Fellows, £1 7*s*. 0*d*.

Abstract of Proceedings of the Royal Entomological Society of London. 1935. Nos. 1–6 (all issued). 3*s*. 0*d*.

Hübner : a bibliographical and systematic account of the entomological works of Jacob Hübner and the Supplements thereto. In 2 vols. By Francis Hemming.

Price	Vol. 1.	605 pp.	£1 15*s*. 0*d*.
,,	Vol. 2.	275 pp.	15*s*. 0*d*.

The next Meeting will be held on Wednesday, 7th November, 1945, **at 3.30 p.m.**

Published by The Royal Entomological Society of London *and sold at its Rooms,* 41, *Queen's Gate, S.W.*7, *price* 6*d*.